

which subsequently occurred. The question of identity may be definitely settled if any observations of the spot during the interval from January 13 to 27 are forthcoming from foreign observatories. In this part of England the sky was densely overcast at night during the whole of that time. If Prof. Hough at Chicago or some other systematic student of the planet can supply the missing links for the period referred to, it will be most important to ascertain how far they corroborate the assumed identity of the markings in question.

These white spots are liable to great variations in apparent brilliancy at short intervals; so that, unless an observer is very careful to discriminate between objects approximately situated, he is certain to introduce complications into his results. But, in regard to the conspicuous white spot which has been the subject of so much comment during the last few years, I have never found much difficulty in following it, because of its special character. Occasionally smaller spots slightly nearer the equator are seen on each side of it, but the leading spot of the trio is so bright and almost invariably shows a bright trail running from its north-east side towards the equator, that it may be readily identified. During the observations between October 4, 1884, and January 13, 1885, of the present opposition the extreme brilliancy of the spot was very noticeable, and the observations were pursued without any liability to error. I fear, however, that, morning observations being rendered necessary by the position of the planet in November and December will have enabled the singular vagaries of the white spot to have generally eluded notice.

It is curious that since the end of January this white spot has maintained a rate very nearly conformable to the first meridian of 9h. 50m. 12^h 25s., computed by Mr. Marth from the observations between 1882 and 1884; but there occurred a sudden deviation between March 14 and 18, amounting to some 8°. These singular displacements cannot be induced by changes in the form of the object, and they are far too considerable to be referred to errors of observation. Between February 9 and 16, 1882, Prof. Hough noticed an acceleration of 6^h 3^m.

The verification and true cause of these variations can only be efficiently sought out by frequent and very accurate observation. Our own climate is very ill-adapted to an investigation of this kind where the most essential point consists in closely consecutive results. What we need is an almost unbroken series. It is to be earnestly hoped that some attention will be devoted to this important work at the Lick Observatory, where "the elevation is 4200 feet above the sea, and for six or seven months of the year every night is clear!" The position thus commands natural advantages (in this work of far more importance than instrumental advantages) which would enable it to obtain some most valuable evidence bearing on the question of the remarkable variations affecting the white spots on Jupiter. Near the time of opposition they might be observed every night, and it is this consecutive, close treatment that is required before the phenomena will really admit of satisfactory discussion.

The question arises whether the whole southern belt partakes in these erratic and apparently frequent variations of speed, or whether they are confined to proper motions affecting the individual spots at different times. If several markings were made the subject of contemporary study it might soon be determined whether they exhibited uniform displacements, and, if so, it would have to be admitted that the whole equatorial atmospheric current is subject to the singular onrushes and alternating lulls which our recent observations have demonstrated.

Of the new features presented during the last few months the most striking are:—

(1) The appearance of large, bright spots indenting the north edge of the great northern equatorial belt. A peculiarity of these objects is that lines of light flowing from

their west sides divide the dark belt and finally emerge near the equator, where they became indefinite. These spots show a rotation period only a few seconds less than the red spot.

(2) The outbreak of dark, reddish spots, elongated in longitude, upon the narrow belt which became visible in 1882, immediately outlying the great belt. The depression north of the red spot was formed by the ends of this belt suddenly dipping northwards before reaching the spot where they became blended with the old belt. The spots now visible here are very plain and will probably increase until finally their material is dispersed around the planet and the belt becomes much darker than before. The individual spots should be carefully watched to ascertain whether this is their ultimate development. The rotation period they have hitherto shown is precisely the same as that of the red spot. One of the most conspicuous of these new spots is about 10,000 miles long; it follows the red spot 1h. 48m., so that its longitude is 66° east.

(3) The fading away of the west shoulder of the depression north of the red spot. This is now very obvious, and extends along the narrow belt far to the west of the red spot. It remains to be seen whether this decadence will continue now that various other regions of the belt exhibit a confluent eruption of dark spots.

The several features referred to are of extreme interest, as suggestive of peculiar forms of atmospheric disturbance and as affording fresh materials for students of Jovian phenomena. It will be necessary to follow each of these special features during the two ensuing months, and to recover them, if still visible, when the planet reappears in the morning sky towards the end of October next.

W. F. DENNING

NOTES

AT the *conversazione* of the Royal Society on Wednesday evening last week, the Fellows, we are sure, were all glad to see their President back again, in renewed health, after his long absence. Prof. Huxley had to welcome a very large number of guests, and some of the objects exhibited were of much interest. Prof. H. N. Moseley exhibited a collection of Pueblo Indian pottery, charms, prayer-sticks, &c., from Zuni, New Mexico; Gen. Strachey, an instrument for drawing curves of sines adapted to graphical representation of the harmonic components of periodical phenomena; Mr. W. T. Thiselton Dyer lent some beautiful flowering specimens of Himalayan rhododendrons (the small, rosy-pink *R. glaucum* and the large, velvety-white *R. nuttallii*), a fruiting branch of coffee, and the various vessels and implements used in the collection and preparation of Para india-rubber; iridio-platinum weights, with a density of 21.5660, absolutely adjusted, and a piece of platinum wire .00075 of an inch, prepared by drawing, &c., were exhibited by Mr. G. Matthey; the Linnean Society lent a remarkable set of drawings from the collection of Lady Impey, at Calcutta, painted by a native of Patna towards the end of the last century, and still in perfect preservation; the Anthropological Institute contributed ethnographic photographs of various races; and there were many highly interesting philosophical instruments shown.

THE Council of the British Association have nominated Prof. J. Struthers, M.D., as a Vice-President of the Association for the Aberdeen meeting, and have added the name of Prof. J. Stirling, M.D., D.Sc. (Aberdeen) to the list of those nominated for the Vice-Presidency of Section D.

AT the invitation of Prof. Flower, a meeting of the Essex Field Club will be held on Saturday afternoon, May 16, at 3.30, in the Lecture Room at the Zoological Gardens, when the Professor will speak of the principal objects of interest in the

Gardens, and will afterwards conduct the party to visit them in order, and give a demonstration of the most remarkable species.

A LETTER of Mr. Miklucho Maclay is inserted in the *Izvestija* of the Russian Geographical Society (1834, vi.), in which he expresses his regret that he cannot yet return to Russia, and explains the plan he has adopted for the publication of his reports. He wishes to have them published in two different parts, the first to contain (a) a statement of the reasons for any voyage or important excursion which he has undertaken, (b) a detailed narrative, and (c) scientific results of each of them; the second part to contain the scientific results concerning (a) anthropology, (b) ethnology, (c) zoology and comparative anatomy, (d) meteorology. In this manner Maclay hopes to suit both those who desire a general view of the outcome of his travels, and those who wish to make themselves more particularly acquainted with the scientific results. By the way it may be mentioned that he has already described some new species, viz. (1) *Dorcopsis Chalmersii*, (2) *D. Macklayi*, (3) *Macropus Jukesii*, (4) *M. gracilis*, (5) *M. tibol*, (6) *Brachymelis garagassi*, (7) *Mus yelue*.

THE following, from *Science*, is a complete list of the papers read at the meeting of the National Academy of Sciences, April 21-24:—J. S. Billings and Dr. Matthews, U.S.A., methods of measuring the cubic capacity of crania; S. H. Scudder, winged insects from a palæontological point of view; A. S. Packard, the Syncarida, a hitherto undescribed group of extinct malacostracous Crustacea; the Gampsonychidae, an undescribed family of fossil schizopod Crustacea; the Anthracaridae, a family of carboniferous macrurous decapod Crustacea, allied to the Eryonidae; Alexander Agassiz, the coral reefs of the Sandwich Islands; the origin of the fauna and flora of the Sandwich Islands; T. Sterry Hunt, the classification of natural silicates; Elias Loomis, the cause of the progressive movement of areas of low pressure; C. B. Comstock, the ratio of the metre to the yard; C. H. F. Peters, an account of certain stars observed by Flamsteed, supposed to have disappeared; J. E. Hilgard and A. Lindenkohl, the submarine geology of the approaches to New York; Theodore Gill, the orders of fishes; J. W. Powell, the organisation of the tribe; G. W. Hill, on certain lunar inequalities due to the action of Jupiter, and discovered by Mr. E. Neison; E. D. Cope, the pretertiary Vertebrata of Brazil; the phylogeny of the placental Mammalia; C. A. Young, some recent observations upon the rotation and surface-markings of Jupiter; H. A. Rowland, on the value of the ohm; F. A. Genth and Gerhard vom Rath, on the vanadium minerals—vanadinite, endliche, and descloizite—and on iodyrite, from the Sierra Grande mine, Lake Valley, New Mexico; A. N. Skinner (by invitation), on the total solar eclipse of August 28, 1886; Theodore Gill and John A. Ryder, the evolution and homologies of the flukes of cetaceans and sirenians; Ira Remsen, chemical action in a magnetic field; A. Graham Bell, the measurement of hearing-power; A. Graham Bell and F. Della Torre, on the possibility of obtaining echoes from ships and icebergs in a fog. The following biographical notices of deceased members were also presented: of Dr. J. J. Woodward, U.S.A., by J. S. Billings; of Gen. A. A. Humphreys, U.S.A., by H. L. Abbot; and of William Stimpson, by Theodore Gill.

BOTANY, as well as geology, we are pleased to notice, is well represented upon the Afghan Boundary Commission. Mr. Condie Stephen, who has just arrived in London, speaking of the Penjdeh Valley or Koosh Valley, stated to a press representative that Dr. Aitchison, who has charge of the botany of the Expedition, is delighted with the country, and has made a very large and valuable collection.

THE *Times* Calcutta Correspondent telegraphs that the Indian Government has at last begun to fulfil a promise made years ago to the Asiatic Society, that a systematic zoological exploration of the depths of the Indian seas should be undertaken, in connection with a survey of the coasts. "A skilled naturalist, Dr. Giles, has been attached to the surveying steamer *Investigator*, which is supplied with proper appliances for deep-sea dredging. During a recent cruise in the Bay of Bengal some casts were made with very interesting results. Some of the animals found appear to be new, and have been sent home for examination. The dredgings also proved that the depression of the bottom, near the mouth of the Hooghly, known as the Swatch, regarding which much speculation had been indulged in, was merely a deep submarine valley, forming part of the original basin of the Bay of Bengal—as Sir Charles Lyall long ago suggested."

A PORTION of the work of Protestant missionaries in China, which has attracted little attention in this country, and which, nevertheless, is of great importance, is the preparation of school- and text-books in Chinese. For this purpose Protestant missionaries of all nationalities and denominations have united. At a general conference held in Shanghai in 1877, a committee of eight of the leading missionaries was appointed to superintend the preparation and publication of the series. The work has now been going on for eight years, and the Committee are able to report that over forty works have been issued, and that thirty more are in various stages of progress. In addition, four numbers have been issued of an "outline series" compiled with the object of supplying Chinese schools with small and simple treatises on scientific subjects at cheap rates, suitable either as elementary school-books or as popular tracts for general distribution. What "cheap rates" mean will appear from the fact that the outlines of astronomy costs rather less than a penny, that of political and physical geography and geology about two-pence each. The larger works embrace anatomy, in five volumes; ancient religions and philosophies in three; arithmetic, charts of astronomy, birds and mammals, with accompanying handbooks (these charts, from the prices, are obviously intended for the walls of schools); chemistry, political economy, geology, universal history, international law (a translation of Bluntschli, it appears), zoology, and several on biblical topics. Those in preparation include treatises on various branches of elementary mathematics, botany, ethnology, hygiene, jurisprudence, logic, mathematical physics, meteorology, mineralogy, philology, and forty wall-charts with accompanying hand-books. These works, it must be remembered, have first to be compiled with a special view to the knowledge usually possessed by Chinese children, and then to be translated, representing in each case two distinct tasks. That the missionaries in China and elsewhere have schools where they teach the young is well known, but it will probably be a surprise to many to find that, in addition to their ordinary labours as preachers and teachers, the missionaries in China have had to undertake a task of such magnitude as the creation of school literature on all subjects of human knowledge, from arithmetic to jurisprudence, and from anatomy to logic. The statement on this subject is taken, it should be added, from the *Chinese Recorder* of Shanghai, a magazine which is itself a monument to the learning and enterprise of Protestant missionaries in China.

THERE will be an Exhibition of Plans, Maps, and Models in connection with the International Congress on Inland Navigation to be held in Brussels from May 24 to June 2. Those desiring to contribute are requested to send in their exhibits at once, addressed, carriage-free, to Mr. A. Gobert, 212, Rue de la Victoire, Brussels.

AN interesting scheme in connection with the Bedford School is that of higher education for adults by means of evening

lectures on literary and scientific subjects, at nominal fees. The lecturers are drawn for the most part from the staff of Bedford School. Among the scientific subjects included in the course are mathematics, geology, physical geography, and botany. Bedford is fortunate in having amongst its residents men qualified and willing to organise and carry out an excellent plan of this nature for its benefit.

THE British Consul at Leghorn in his report for the past year makes some interesting observations on coral in the Mediterranean. Some centuries back the Mediterranean coral fisheries were carried on exclusively by the Spaniards, and the principal establishments engaged in the manufacture of coral ornaments were in the hands of Jews residing in Spain. Towards the close of the sixteenth century, to escape the persecutions to which they were exposed, a large number of these merchants removed to Leghorn, in order to enjoy the secure asylum afforded by the liberal enactments of Ferdinando di Medici. Crews were obtained from the Neapolitan coast, principally from Torre del Greco; hence this place at an early period became the chief seat of the coral fishery, and most of the boats engaged in it are still fitted out at that port, although the manufacture of coral ornaments and beads is carried on principally at Leghorn and Genoa. These ornaments are met with in almost every part of the world, and in many countries, even in Europe, coral is believed to be possessed of a peculiar charm. In Asia and Africa it is regarded with a sort of religious veneration, while in India it is largely used for the adornment of corpses when prepared for cremation. But the present situation of the coral trade is disastrous. In 1880, a coral bank several kilometres in length was discovered near the island of Sciacca, on the coast of Sicily, and consequently the yield of raw material has been far in excess of the demand, and the reef is still very far from being exhausted. A great depreciation in value has ensued, and as a consequence an extensive trade has sprung up in coral with Africa, where the natives now purchase coral ornaments in place of glass beads of Venetian and German manufacture. The raw coral comes from Naples, and is worked at Leghorn by women into beads, British India and Egypt being the chief customers for them.

ON April 24 Mr. Edward Berdoo, M.R.C.S., read a paper at University College, Gower Street, before the Browning Society, on "Browning as a Scientific Poet." The paper, as reported in the *Lancet*, opened with an exhaustive argument to prove that the progress of science need not, as some had said, tend to the destruction of the poetic art; that, in fact, some of the greatest poets had enriched their verse by the study of natural phenomena—Lucretius, Haller, Milton, and Goethe, and in our own times Tennyson and Browning, while students of natural and physical science had not found their exact acquaintance with natural laws impede the luxuriant growth of their poetic fancy. Many of Browning's most beautiful similes were the result of his intimate acquaintance with anatomy, physiology, and chemistry; and the use he constantly makes of figures drawn from the science of optics has enabled him to illustrate his favourite optimism by much beautiful imagery. The poet of the future will be denied his former "power of dealing capriciously with facts," but this restraint, Mr. Berdoo argued, would not repress the poetic spirit. Mr. Berdoo, in conclusion, claimed for Mr. Browning that he is essentially the poet for the scientific man: abreast of the highest culture of his time, and in close touch with the great aims of science.

HERR SCHWEIGER, writing from Widdin to the *Monatsschrift für den Orient*, refers to baldness amongst Orientals. In Europe the idea is general that baldness is the prerogative of scholars;

in the East, on the other hand, it is the common characteristic of two races—the Spanish Jews and the Turks, whose nervous system has never been overwrought by any devotion to serious studies. In some measure to explain the origin of this phenomenon we must commence at the cradles of the two peoples living side by side. The indolence of Oriental women is well known and is manifested in sins of omission rather than of commission. The Oriental mother neglects the principal duties to her offspring. During the first eight days of its earthly career the infant is sprinkled with a little tepid water once a day by some old woman, then wrapped in coloured rags to save the trouble of frequent changes, the head being wrapped in a well-wadded cap tied under the chin. This process is repeated during the succeeding weeks once every two days, until finally it has become too toilsome even for this repetition, and is abandoned altogether, through fear, it is said, that the child would catch cold from frequent washings. Superstition has added its force to laziness, for the women believe that the head of an infant should never be washed, as the scab produced by the dirt is good for the eyes. This dirt, mixed with the secretions from the sebaceous and other glands, becomes the home of numerous animal and vegetable parasites, which prevent the development of hair and destroy that already grown. The open air, which might assist in destroying these parasites, is, however, carefully excluded by the custom which is imperative among Semitic peoples of never, by day or night, or upon any occasion whatsoever, taking off the head-covering. At night the fez is changed for a linen cap of similar shape. This perpetual covering naturally retards the growth of the hair, and transmission and propagation do their work. Herr Schweiger, who has lived in the East for many years, first noticed chronic baldness amongst the lower classes of the Turks, especially the so-called Spaniards of Salonica.

THE National Fish Culture Association's hatchery at South Kensington is now gradually becoming depleted of fry, which are being transmitted to public waters gratuitously, and to the fishery at Delaford belonging to the Association. The spawning and hatching season has been very prosperous and successful, there being but a very low minimum mortality amongst the fish produced.

THE Aquarium at the International Inventions Exhibition is assuming a more complete aspect, and has been an attractive feature with visitors from the first. An Aquarium Handbook is now in the press and will be shortly published by Messrs. Clowes and Sons, containing a natural history of the fish in captivity and a series of articles upon the culture of fish, the management of aquaria, &c.

ON April 22 a meteor was seen descending in a straight line from the zenith at Fogelsta railway station in Östergötland, Sweden, and fall some distance off. On the station-master proceeding to the spot he found a stone, about the size of a hand, and brown in colour, which smelt strongly of phosphorus when struck against a hard object. It was split into three pieces, each being forwarded to a museum.

THE *Calcutta Gazette* has published a resolution of the Government directing the institution of an inquiry, under a specially selected officer, into the castes and occupations of the people of Bengal. The results of this inquiry should be of great ethnographical value.

THE exceptionally heavy rainfall at Bergen on October 25, 1884, when 74 mm. were registered for the twenty-four hours, was commented on at the time by the Scandinavian press as affording confirmatory evidence of the truth of the popular

opinion that this town is the rainiest place in Norway. This notion, however, like many other traditional beliefs, has been dissipated by the test of carefully-conducted scientific observations, for we learn from *Nature* that the annual mean of its rainfall is exceeded by that of two among the other seventy Norwegian meteorological stations. Thus while at Bergen 1722 mm. are measured annually, the rainfall at Domsten and Florø amounts respectively to 1951 mm. and 1873 mm. It has further been shown that 105 mm. rain were registered at Holmedal on the Söndfjord, on the same day that the rainfall at Bergen reached 74 mm., the highest recorded since rain-measurements have been made there. There are in fact eighteen instances given by the meteorological reports in which the rainfall has elsewhere exceeded the latter measure. Among these the most remarkable have been supplied by Ullensvang and Flesje, at the former of which stations there fell in one day (December 8, 1884) 113 mm. rain, while at the latter 112 mm. were registered for the twenty-four hours on March 15, 1882. These downfalls, the highest recorded in Norway since the observations were begun in 1875, have been exceeded, according to Dr. Hamberg of Stockholm, at the Swedish station of Hernösand, where 118·5 mm. rain fell on August 19, 1878. Facts such as these effectually refute the opinion, alike strenuously maintained by natives and foreigners, that more rain falls at Bergen both in the year and in the course of one day than at any other place in Scandinavia. Such, however, is the character of the annual distribution of rain in this locality, that the chances are about equally in favour of a wet or a dry day.

In reporting to the Empress of China the occurrence of a violent earthquake at the town of Pu-erh on November 14 last year, the Viceroy of Yunnan observes with humility that this awful visitation is to be regarded as a penalty of Heaven for his own inefficiency and incompetency and that of his staff. They will, the memorialist promises, endeavour to take the lesson to heart and earnestly amend their ways. Pu-erh will be remembered by readers of Mr. Colquhoun's "Across Chrysé" as an important town on the borders of the Shan States, with a large trade in tea. The earthquake here referred to is also worth notice as showing that seismic activity during the past winter was manifested over a vast area, and indeed seems to have affected the greater part of the Old World. At Pu-erh the shock lasted an hour, causing the collapse of a large number of houses, temples, and public buildings, while many lives were lost, and much injury was caused to the inhabitants.

M. LÉO ERRERA calls attention in the *Bulletin Scientifique du Département du Nord* to the value of Indian ink, on account of its harmlessness and its intense coloration, for the study of certain microscopic organisms. He has succeeded in keeping infusoria, &c., alive for several days in the liquid, the carbonic matter not appearing to affect them in the slightest degree. For making durable preparations ink diluted with water should be gradually replaced by that diluted with glycerine. Many organisms which are distinguished with difficulty in water, are easily observed in water charged with Indian ink; this is especially the case with many *Alge*. M. Errera thinks that this new method could probably be applied with advantage to the study of the digestion of the infusoria, and to the movements of ciliated organisms.

THE additions to the Zoological Society's Gardens during the past week include a Green Monkey (*Cercopithecus callitrichus* ?) from West Africa, presented by Mrs. Wall; a Rhesus Monkey (*Macacus rhesus* ♂) from India, presented by Miss Margaret Ellis; a Getulen Ground-Squirrel (*Xerus getulus*) from North-West Africa, presented by Mr. W. Cook; a Grey Ichneumon (*Herpestes griseus* ?) from India, presented by Mrs. Dundas; two Martinican Doves (*Zenaidura martinicana*) from Bahamas, presented by Mrs. Blake; two Horned Lizards (*Phrynosoma*

cornutum) from Texas, presented by Mr. J. G. Witte; a Dorsal Squirrel (*Sciurus hypopyrrhus*) from Central America, an Indian Mynah (*Acridotheres ginginianus*), four White-backed Pigeons (*Columba leuconota*), a Black Hill-Squirrel (*Sciurus macrurus*) from India, two Chinese Jay-Thrushes (*Garrulax chinensis*) from China, a Sun Bittern (*Eurypyga helias*) from Brazil, two Greek Partridges (*Caccabis saxatilis*), South European, a Double-banded Sand-Grouse (*Pterocles bicinctus*) from Senegal, a Talapoin Monkey (*Cercopithecus talapoin*) from West Africa, a Negro Tamarin (*Midas ursulus*), a Humboldt's Lagotherix (*Lagotherix humboldti* ♂), a Rosy-billed Duck (*Metopiana peposaca* ♀) from South America, a Viscacha (*Lagostomus trichodactylus*), a Scorpion Mud-Terrapin (*Cinosternon scorpioides*) from Buenos Ayres, a Gadwell (*Chauelasmus strepera* ♂), nine Spotted Salamanders (*Salamandra maculosa*), European, purchased; a Crossoptilon (*Crossoptilon manchuricum* ♂) from Northern China, received in exchange; a Gayal (*Bibos frontalis*), two Long-fronted Gerbilles (*Gerbillus longifrons*), born in the Gardens.

OUR ASTRONOMICAL COLUMN

THE HARVARD COLLEGE OBSERVATORY, U.S.—The thirty-ninth Annual Report of this Institution has been issued, and with it Prof. Pickering's summary of observations of variable stars in 1884, made agreeably to the plan suggested by him in a communication to the American Academy of Arts and Sciences (vol. xix. p. 296). Thirteen observers, private and professional, have co-operated in these observations, amongst them Mr. Knott, of Cuckfield, and Mr. T. W. Backhouse, of Sunderland. In the summary referred to, the positions of the stars for 1875, the limits of variation and the periods, as far as reliably determined, are repeated from the circular of last year, and these particulars are followed by a statement of the number of observations of each star, made by the various observers in the course of 1884, so that it is easy to see which objects most require attention. It is certain that in this branch of observational astronomy there is ample work for a much larger number of co-operators, which it may be hoped that Prof. Pickering will succeed in enlisting amongst our amateurs, and eventually it may be possible to particularise the objects which each one may undertake to watch effectively, so as to secure observations of the whole or the majority of the list in each year.

With regard to the general proceedings of the Harvard Observatory, it is stated that photometric observations of the eclipses of Jupiter's satellites have been continued upon the system adopted in 1878, and 284 eclipses have now been thus observed, forty-seven since the end of October, 1883. The revision of the zone-observations of stars between 50' and 60' north of the equator has been completed during the year. Selections of stars for standards of stellar magnitude have been made for regions extending four minutes (time) in right ascension, and ten minutes in declination, and additional photometric methods of measurement are under consideration for determining such magnitudes with satisfactory precision. Observations of comets, of the spectra and colours of stars, and a tentative revision of the magnitudes of the *Durchmusterung*, have also formed a part of the year's work. We do not learn from the report that any attempt has been made to repeat the valuable series of observations on the rings of Saturn, made by the Bonds, &c., with the Harvard 15-inch refractor, when the planet was previously situated in the position it occupied in 1884; but the class of observations more especially attended to at present may have rendered this impracticable. Vol. xiv. parts 1 and 2 of the *Annals* have been published; the latter part has been circulated very recently.

TEMPEL'S COMET (1867 II.).—Up to the 7th inst. it does not appear that the editor of the *Astronomische Nachrichten* had received any notice of the re-observation of this comet. Doubtless, of the last degree of faintness, it could only have been commanded last month by instruments of the highest order. In the next period of absence of moonlight the theoretical brightness will have diminished. The comet will be due in perihelion again in the spring of 1892, a more favourable condition for the observation of this body than has existed in the present year.